

**REMARKS**

Claims 1-6 are pending in the application. Claims 1-6 stand rejected. Claim 1 is an independent claim.

Claims 1-4 and 6 have been amended to describe each of the opto-electric converter, the amplifier circuit, the bit rate-sensing circuit, the bit rate-recognition circuit, the clock/data recovery circuit, and the controller, structurally. Applicant does not make the amendments for any reason related to patentability of claims 1-4 and 6, and applicant makes no disclaimer through the amendments.

Applicant wishes to thank the Examiner for indicating that claim 5 is allowable if rewritten as an independent claim incorporating all features of the base and any intervening claims. At this time, applicant wishes to defer rewriting claim 5 as an independent claim.

Claim 1 stand rejected under 35 U.S.C. ' 103(a) as allegedly being obvious over Williams (U.S. 5,864,416) in view of Chorey *et al.* (U.S. 6,163,709) ("Chorey"). Claim 1, originally, recited a number of functional features that followed the term "for" and that **further described each components** disclosed in claim 1.

In rejecting claim 1, the Office Action has disregarded the functional features recited after the term "for" (the present Office Action, page 5, paragraph 6), as such features have no patentable weight. The Office Action indicates that

the recitation of intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

(Id.). To support, the Office Action provides *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto* 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Applicant respectfully submits that the Office Action misinterprets the holding of *In re Casey* and *In re Otto*, and the present patent law, and the Office Action erroneously rejects claim 1. In particular, neither *In re Casey* nor *In re Otto* supports the proposition that functional features of an apparatus claim do not have patentable weight. Applicant submits that the holding of *In re Otto* is **limited to a product-by-process claim**. As such, the holding of *In re Otto* does not apply to the present **apparatus** claim 1.

Meanwhile, *In re Casey* holds that the **difference in the type of materials which the claimed invention and the prior art operate upon** **does not sufficiently distinguish the claimed invention** from the prior art (See *In re Casey*, at page 579-580 (stating that patent applicant's sole argument in its appeal is that the fundamental difference between the claimed invention and the prior art is that the claimed invention operates on adhesive tapes while prior art operates on ordinary sheets)) (emphasis added). Therefore, the case sheds no light on the propriety of disregarding functional feature, and the case does not support the Office Action's contention.

As neither case holds that the functional features of an apparatus claim do not have patentable weight, neither case is applicable to the present apparatus claim 1, and neither case may be relied upon to disregard the functional features and reject claim 1.

Even if two cases hold that a functional feature has no patentable weight, neither holding represents the current patent law. The United States Court of Appeals for the Federal Circuit explicitly held in *In re Schreiber* that a "patent applicant is free to recite features of an apparatus **either structurally or functionally**" (128 F.3d 1473, 1478, 44 USPQ.2d 1429 (Fed. Cir. 1997)) (emphasis added). Only if the

Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, [the Patent Office] possesses the authority

to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

(Id. (quoting *In re Swinehart*, 439 F.2d 210, 212, 169 USPQ 226 (CCPA 1971))).

As *In re Schreiber* was held subsequent to both *In re Casey* and *In re Otto*, the **holding of *In re Schreiber* supersedes or preempts the holdings of *In re Casey* and *In re Otto***, if the holding of the cases conflict.<sup>1</sup> Therefore, **the Office Action is bound by the current Patent Law**, as held in *In re Schreiber*, **to consider the functional feature recited in a claim** (see also *In re Zurko*, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997), *aff'd en banc*, 142 F.3d 1447 (Fed. Cir. 1998), *vacated on other grounds by* 527 U.S. 150 (1999)). Applicant respectfully submits that if the functional features, which further describe each components disclosed in claim 1, are considered, claim 1 is undeniably patentable over Williams and Chorey, alone or in combination.

In particular, claim 1 originally recited “**a bit-rate sensing circuit connected to receive the amplified electrical signal for generating a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal.**” Applicant submits that the functional features following the term “for” further describes the bit-rate sensing circuit that receives the amplified electrical signal as the one that also generate a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal (see Detailed Description of the present application, page 8, line 1-3).

The Office Action indicates that such bit-rate signal sensing circuit is inherent to the clock recovery circuit (50), as disclosed in Figure 5 of William (present Office Action, page 2, paragraph 3).

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<sup>1</sup> In the present case, the holdings do not conflict because neither *In re Casey* nor *In re Otto* holds that functional feature need not be given patentable consideration.

However, nowhere does Williams disclose that the clock recovery circuit (50) receives the amplified electrical signal and generates a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal. Instead, Williams discloses that the clock recovery circuit (50) simply extracts the data rate from the received signal with a phase lock loop contained in the clock recovery circuit (50) (column 3, line 66 – column 4, line 1) and outputs respective data and clock signal at respective output ports 51 and 52 (column 3, line 57-60). Moreover, no other component within Williams receives amplified electrical signal and generates a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal, as recited in claim 1.

Therefore, applicant respectfully submits that the bit-rate sensing circuit that receives an amplified electrical signal and that generates a sensing signal having a predetermined voltage level corresponding to the bit rate of an optical signal is neither present nor inherent to the clock recovery circuit (50) or to any other components disclosed in Williams. Williams, therefore, fails to show “a bit-rate sensing circuit connected to receive the amplified electrical signal *for generating a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal*,” as recited in claim 1.

Chorey, as read by applicant, discloses a cellular phone with a logarithmic detector. However, Chorey also fails to disclose “a bit-rate sensing circuit connected to receive the amplified electrical signal *for generating a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal*,” as recited in claim 1.

As both Williams and Chorey fail to disclose “a bit-rate sensing circuit connected to receive the amplified electrical signal *for generating a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal*,” as recited in claim 1, two

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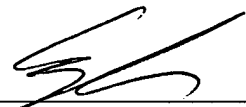
references fail to render claim obvious. Applicant respectfully requests withdrawal of the rejection.

Other dependent claims in this application are each dependent on the independent claim 1 and believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

If any issues remain which may be best resolved through a telephone communication, the Examiner is requested to kindly telephone the undersigned telephone number listed below.

Respectfully submitted,

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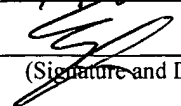
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